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FROM: Adrian Treves, PhD
 Professor of Environmental Studies
atreves@wisc.edu
<http://faculty.nelson.wisc.edu/treves/>

TO: USFWS
 SUBJECT: FWS-R6-ES-2022-0100-0791 (10j permit to Colorado)

I am a predator ecologist and interdisciplinary scientist who has studied wolves since 2000. My professional affiliation is the University of Wisconsin-Madison's Nelson Institute for Environmental Studies. I am the lead author or co-author on 102 peer-reviewed scientific articles addressing ecology, conservation or the human dimensions of wildlife and another similar number of book chapters and other scientific writing.

I only support the 10j rule for the purpose of collecting wolves to reintroduce to Colorado. I do not support the 10j permit for killing wolves as I explain below.

U.S. agencies often rely on two outdated and falsified articles by E.R. Olson et al. (2015) and Bradley et al. (2015). As we show below, Olson failed to account for collared wolves that disappeared and that article failed to distinguish between correlation and causation. We have falsified their claims in a number of articles listed below. In sum, the proposed 10j permit will not improve tolerance for wolves either in attitudes or behavior of the average member of the public. Bradley et al. 2015 has been shown to be irreproducible by Santiago-Avila et al. 2018. Killing wolves to prevent predation on livestock may protect one farm but harm neighbors. *PLoS One* **13**: e0189729 10.1371.

- Attitudes to wolves became more negative or did not improve when protections for wolves were reduced ¹⁻⁴
- Poaching was higher when wolf protections were reduced, measured by individual wolf survival rates ⁵⁻⁷
- Poaching was higher when wolf protections were reduced, measured by wolf population dynamics ⁸⁻¹¹
- Poaching is the major cause of mortality and mismeasured or under-reported by agencies because of cryptic poaching ¹²⁻¹⁴
- Moreover, you should be aware of additional work on poaching and the effects of lethal control of wolves: ^{15-21 17,18,22}
- Finally, lethal methods permitted by the 10j rule are sometimes claimed to protect domestic animals from wolf predation. There is currently no strong evidence for that claim. Moreover, there is currently better evidence for non-lethal methods to protect domestic animals. See the references in this pre-print to published, peer-reviewed, randomized, controlled trials on fladry, livestock guarding dogs, and range riders practicing low-stress livestock handling: http://faculty.nelson.wisc.edu/treves/pubs/preprint_Treves_Elbroch_Bruskotter.pdf

Finally I will try to attach these and other articles important to modern wolf conservation. Note that all the articles cited below are freely available at <http://faculty.nelson.wisc.edu/treves/publications.php>

Thanks For Your Kind Attention
 A. Treves

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